

REMARKS

In the Office Action, the Examiner rejected claims 1-20. By this response, Applicant cancels claims 17-20, adds new claims 21-24, and amends claims 1-3, 5, 8-12, 14, and 16 for clarification of certain features to expedite allowance of the present application. These amendments do not add any new matter. Upon entry of these amendments, claims 1-16 and 21-24 remain pending in the present application and are believed to be in condition for allowance. In view of the foregoing amendments and the following remarks, the Applicant respectfully requests reconsideration and allowance of all pending claims.

Rejection Under 35 U.S.C. § 103

The Examiner rejected claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Wark (U.S. Pat. No. 6,710,614) in view of Farnworth et al. (U.S. Pat. No. 6,233,154). Specifically, the Examiner stated:

Regarding claims 1, 5 and 8, Wark discloses a server (figures 2a-b) comprising: a circuit board (19) comprising a plurality of electrical connector(s)/socket(s) connected memory chips (17) disposed on a first side of the circuit board; a chassis (13, figure 2a-b) having at least one of a front opening; a board holder (1) operable to receive the circuit board and provide access to the first electrical connector, wherein the board holder is operable to be pivoted relative to the chassis to enable the circuit board to be disposed within the board holder; and a securing member operable to selectively secure pivotal movement of the circuit board relative to the chassis.

Wark discloses the instant claimed invention except for the circuit board having a second electrical connector disposed on a second side of the circuit board opposite the first side of the circuit board.

Farnworth et al. disclose a circuit board (62) having a plurality of electrical components (66) mounted on their socket(s)/connector(s) on both sides of the circuit board (figures 3a-b).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to mount

electrical components through connector(s)/socket(s) into another side of the circuit board of Wark, as suggested by Farnworth, for the purpose of saving space or providing greater memory capabilities.

Regarding claims 9-20, the claimed method steps are inherent in the product structures.

Regarding claims 17-20, Wark discloses a server (figure 3) comprising: means (5) for pivoting a circuit board holder relative to a server chassis; means (25) for selectively securing/releasing the circuit board holder in a first position to a second position relative to the server chassis; and means (socket to connect a chip 17) for coupling at least one memory component to each of a first side of the circuit board.

Wark discloses the instant claimed invention except for the circuit board having a means for coupling at least one electronic component being mounted on the second side of the circuit board opposite the first side of the circuit board.

Farnworth et al. disclose a circuit board (62) having a plurality of electrical components (66) mounted on their socket(s)/connector(s)/means on both sides of the circuit board (figures 3a-b).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to mount electrical components through socket(s)/means into the second side of the circuit board of Wark, as suggested by Farnworth, for the purpose of saving space or providing greater memory capabilities.

Office Action, pages 2-4.

The Applicant respectfully traverses the rejection. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). To establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (Bd. Pat. App. & Inter. 1985).

The Applicant respectfully asserts that, in the present case, the Wark and Farnworth references considered in conjunction with each other cannot render the Applicant's claims obvious under 35 U.S.C. § 103. Specifically, the Applicant asserts that the references considered together or separately are deficient because they would not include all of the elements recited in the Applicant's claims. Accordingly, the Applicant asserts that the Examiner has not established a *prima facie* case of obviousness. In support of this assertion, the Applicant sets forth specific deficiencies of both the Wark and Farnworth references below.

Embodiments of the present invention relate to a process for accessing a mid-plane board in a server. *See* Application, page 2-3. Specifically, embodiments of the present invention relate to an apparatus for facilitating insertion and removal of a mid-plane board respectively into and from a server chassis. *See* Application, pages 2-4; and FIGS. 2, 4, and 6. For example, FIG. 2 clearly illustrates a pivotable circuit board holder 46 that mounts a circuit board 42 to the middle of a chassis 44. *See* Application, page 7. As illustrated by FIG. 6, the pivotable circuit board holder 46 facilitates removal or installation of the mid-plane circuit board 42 from the front 58 or rear 60 of the chassis 44. *See* Application, page 8.

Accordingly, amended independent claim 1 recites, *inter alia*, "A *server*, comprising: a *mid-plane circuit board* ... a *chassis* having either or both of a *front opening* or a *rear opening*." (Emphasis added). Amended independent claim 9 recites, *inter alia*, "A method of coupling a *mid-plane circuit board* to a *chassis of a server*, comprising: inserting the *mid-plane circuit board* into a circuit board holder *through a side of the chassis*." (Emphasis added).

In contrast to the present claims, the Wark reference is directed to a circuit card receptacle that can be used with automatic *testing equipment*. See Wark, col. 2, lines 23-30. Specifically, the Wark reference discloses a circuit card receptacle for routing dual-sided edge connectors from multichip modules for effecting electrical contact from a single side of the receptacle. *Id.* Further, the Wark reference discloses a test tray suitable for automatic testing of the multichip modules with automatic test equipment utilizing a bed of nails or other probe-type load board interface. *Id.*

Claim 1 of the present application recites a chassis having “either or both of a front *opening* or a rear *opening*” and claim 9 recites “inserting the mid-plane circuit board into a circuit board holder *through a side of the chassis*.” (Emphasis added). Applicant does not agree with the Examiner’s characterization of the single-sided load board as a chassis. However, assuming *arguendo* that the single-sided load board could be equated to a “chassis,” Applicant asserts that the *single-sided* load board clearly does not have a front or rear opening. Additionally, a mid-plane circuit board cannot be inserted through the side of the load board 13 as disclosed in the Wark reference. Accordingly, the Applicant respectfully asserts that the Wark reference does not disclose the chassis as recited in independent claims 1 and 9.

The Applicant respectfully asserts that the Farnworth reference fails to obviate the deficiencies of the Wark reference. The Farnworth reference is merely directed to a SIMM housing including a SIMM circuit board to form a standard outline module. See Farnworth et al., col. 1, lines 15-17. Indeed, the Examiner merely cited the Farnworth reference for its alleged disclosure of “a circuit board (62) having a plurality of electrical components (66) mounted on their socket(s)/connector(s) on both sides of the circuit board (figures 3a-b).”

Office Action, page 3. Therefore, the Farnworth reference cannot remedy the deficiencies of the Wark reference with respect to independent claims 1 and 9 as discussed above.

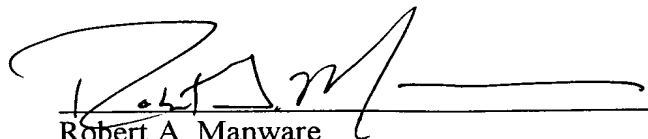
For the reasons set forth above, the Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 103. Additionally, the Applicant requests that the Examiner allow independent claims 1 and 9 and the claims depending therefrom. Further, as set forth above, the Applicant added new claims 21-24. For the reasons discussed in detail above and other claim features, the Applicant believes these claims are patentable over the cited references and in condition for allowance. Therefore, the Applicant requests that the Examiner allow the new claims 21-24.

Conclusion

In view of the remarks set forth above, Applicant respectfully requests allowance of claims 1-16 and 21-24. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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